

Central Pacific Transcontinental Railroad, Tunnel "0"  
Southern Pacific Donner Pass Route Tunnels  
Milepost 132.69  
Applegate vicinity  
Placer County  
California

HAER No. CA-199

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31-APGT.V,  
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**PHOTOGRAPHS**

**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

Historic American Engineering Record  
National Park Service  
Western Region  
Department of the Interior  
San Francisco, CA 94107

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## HISTORIC AMERICAN ENGINEERING RECORD

### CENTRAL PACIFIC TRANSCONTINENTAL RAILROAD, TUNNEL "0"

HAER No. CA-199

**Location:** Southern Pacific Donner Pass Route Tunnels  
Milepost 132.69, Applegate vicinity, Placer County, California

UTM: 10-673340-4316420  
Quad: Greenwood, Calif. 7.5', 1949 (photorevised 1973)  
(west portal)

UTM: 10-673390-4316625  
Quad: Greenwood, Calif. 7.5' 1949 (photorevised 1973)  
(East portal)

**Date of Construction:** 1873.

**Engineer:** Central Pacific Railroad Engineering Department.

**Present Owner:** Union Pacific Railroad, 1416 Dodge Street, Omaha NE 68101.

**Present Use:** Abandoned.

**Significance:** The Central Pacific First Transcontinental Railroad is a segment of the western half of the first transcontinental railroad, built from Sacramento, California to Promontory Summit, Utah between 1863 and 1869, where it joined the Union Pacific Railroad which had built west from Omaha. For the purpose of the current project, the first transcontinental railroad was found likely to be eligible for the National Register of Historic Places at the national level of significance under Criterion A for its significance in transportation history, in uniting the East and the West, and in the development of the West. The railroad's period of significance is 1869 to 1945, from the line's completion in 1869, through the years of its role in the settlement and development of the West, to the conclusion of the railroad's achievements in World War II. Tunnel "0" is a contributive element of this historic property, virtually the last extant unmodified Central Pacific tunnel.

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## **I. DESCRIPTION**

Tunnel "0" is an abandoned, unlined single track railroad tunnel, approximately 800 feet in length and of inverted horseshoe section, with granite ashlar portal faces and wingwalls, and a stone masonry-lined bore. The tunnel is on a tangent (no curve) alignment, and originally carried the tracks of the Central Pacific Railroad Transcontinental Line.

## **II. HISTORICAL INFORMATION**

When the Central Pacific built the first transcontinental rail line over the Sierra Nevada in 1863-1869, expediency stemming from time considerations and from the hand labor used to build the line forced a circuitous route that, wherever possible, hugged the outside slopes of hills to maintain reasonable grades in the climb over the mountain rampart. The builders were able to avoid tunneling until they had nearly reached Blue Cañon, more than seventy miles from Sacramento. There they built Tunnel 1 (HAER CA-207), and sequentially numbered the tunnels following to the east as they pushed the tracks toward Promontory Summit and the May 1869 meeting with the Union Pacific.

Following completion of the transcontinental railroad in 1869, events unclear today forced the Central Pacific to build a new tunnel near Applegate, well to the west of Tunnel 1. It may have been that the south slope of the hill that the original line followed proved to be unstable; a cave-in at that location during the construction of Tunnel 23 (HAER CA-198) in 1909 during the construction of the second track between Rocklin and Colfax may provide a clue. At any rate, in 1873 the Central Pacific built Tunnel "0" at about milepost 133; this remained the westernmost tunnel on the original line west of Sacramento until the double-tracking effort in the first decade of the 20th century. At that time, crews of the Utah Construction Company built Tunnel 23 (then called Tunnel 9) parallel to the 1873 structure and on a slightly lower grade; the old tunnel remained in use, carrying the eastbound mainline.

At an unknown later date, Southern Pacific rerouted the old mainline around the south slope of the hill, constructing a wide bench to carry it, and abandoned Tunnel "0". It remains today, largely hidden behind vegetation at both ends, as virtually the last extant unmodified Central Pacific tunnel (Tunnel 1 was enlarged as a double-track tunnel in 1913, and the other original Central Pacific tunnels to the east were enlarged in the 1920s and again in the 1940s).

Tunnel "0" is included in the documentation set for the Central Pacific Transcontinental Railroad (HAER No. CA-196) in order to provide context, and as a rare survivor of the pioneer route.

## **III. SOURCES**

"Colfax Grade Revision; Southern Pacific," *Railway Age Gazette*, 48:7, February 18, 1910.

Daggett, Stuart. *Chapters on the History of the Southern Pacific*. New York: Augustus M. Kelley, Publishers, 1966; originally published 1922.

Deverell, William. *Railroad Crossing: California and the Railroad, 1850-1910*. Berkeley: University of California Press, 1994.

Hofsommer, Don L. *The Southern Pacific, 1901-1985*. College Station, TX: Texas A&M University Press, 1986.

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Kraus, George. *High Road to Promontory: Building the Central Pacific across the High Sierra*. Palo Alto: American West Publishing Company, 1969.

Sabin, Edwin L. *Building the Pacific Railway*. Philadelphia and London: J. B. Lippincott Company, 1919.

Signor, John R. to Richard Starzak, Memorandum, "Brief Chronological History of Sierra Tunnels," October 4, 1996.

"The Days When The Central Pacific Was Young," *Southern Pacific Bulletin*, 9:5, May 1920.

United States Geological Survey. Topographic map. Greenwood, Calif. quadrangle, 7.5' series, 1949 (photorevised 1973).

#### **IV. PROJECT INFORMATION**

As a result of the 1996 merger of the Union Pacific and Southern Pacific Railroads, a federal undertaking under the jurisdiction of the Surface Transportation Board of the U.S. Department of Transportation, and in order to accommodate freight trains utilizing longer and taller cars and loads--tri-level auto rack cars and cars carrying double-stacked containers, the Union Pacific will need to increase tunnel clearances on the former Southern Pacific Donner Pass Route. The tunnels, built between 1868 and 1925, are contributing elements of the National Register-eligible Southern Pacific Donner Pass Route Tunnels Historic District. All tunnels have been laser-measured and the railroad will determine clearance needs on a tunnel-by-tunnel basis. Some, because of curved alignment, will require interior work to allow for longer cars such as tri-level auto rack cars; others will require both interior and portal work to provide sufficient vertical clearance for "double-stack" container cars. The latter work may impact the character-defining tunnel portals if crown mining of the tunnels (as opposed to lowering the tunnel floors) is selected. Inasmuch as this would cause an adverse effect to the tunnels, Union Pacific has elected to record the tunnels for the Historic American Engineering Record. Tunnel "0" is included in the documentation set for the Central Pacific Transcontinental Railroad (HAER No. CA-196) in order to provide context, and as a rare survivor of the pioneer route. Documentation was carried out by P.S. Preservation Services, John Snyder Field Director and Historian, and Ed Andersen, Photographer. Photos were made in August 1997, and research was carried out from August 1997 through March 1998.